

00935051.082104

Fig. 1A

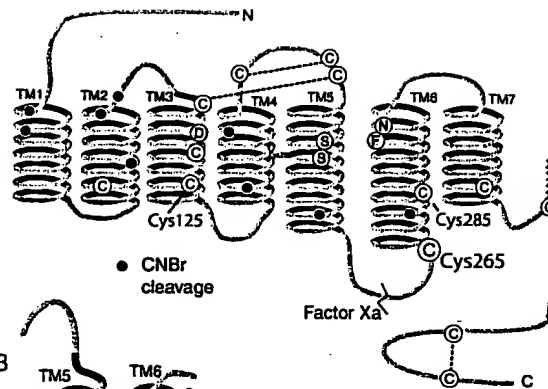
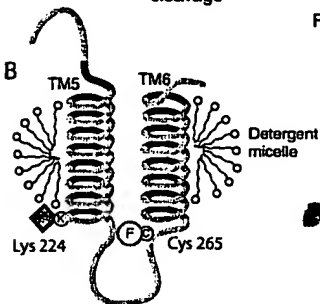
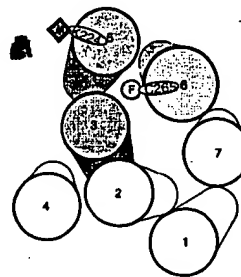


Fig. 1 B



(F) FLUORESCCEIN  
MALEIMIDE  
◇ OXYL-NHS  
(quencher)

Fig. 1C



1017200" 19052660

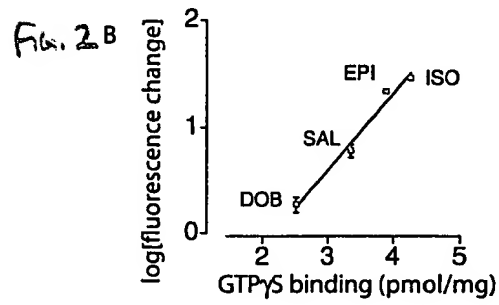
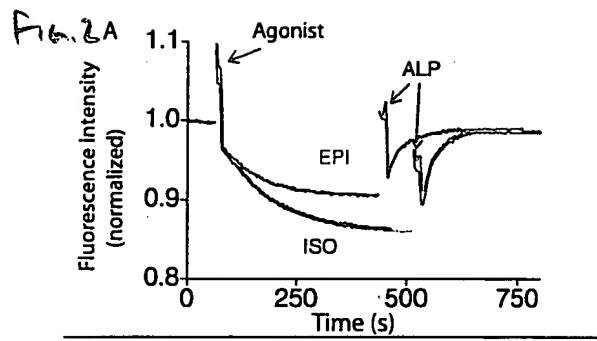


Fig.  
3A

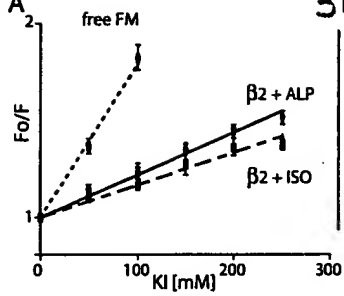


Fig.  
3B

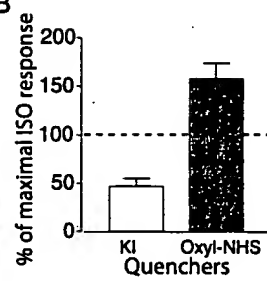


Fig. 4 A

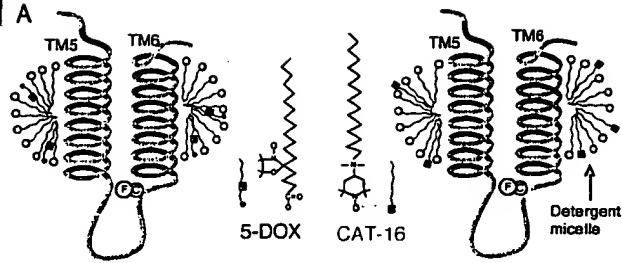


Fig. 4 B

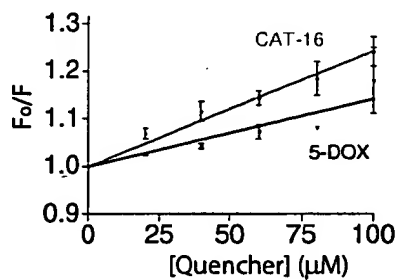


Fig. 4 C

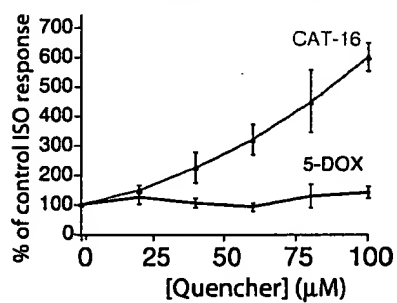
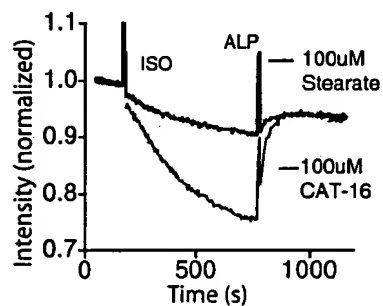


Fig. 4 D



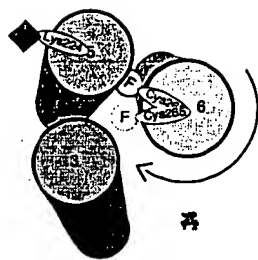


FIG. 5A

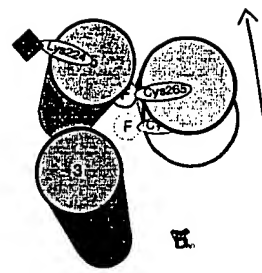


FIG. 5B

Fig. 6 A

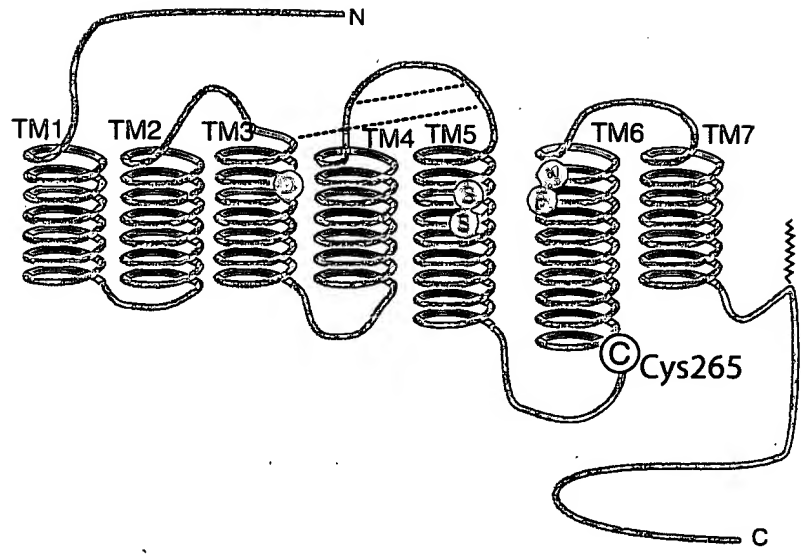
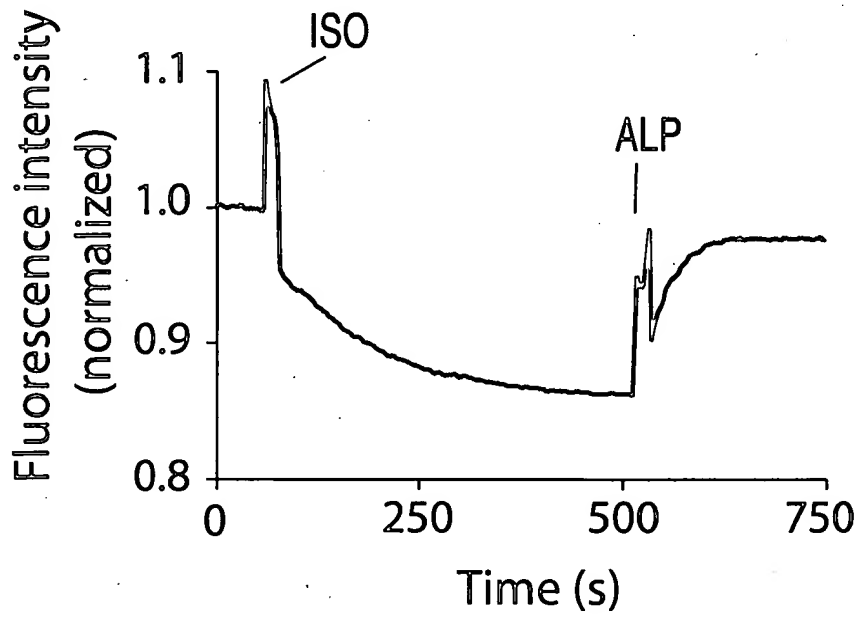
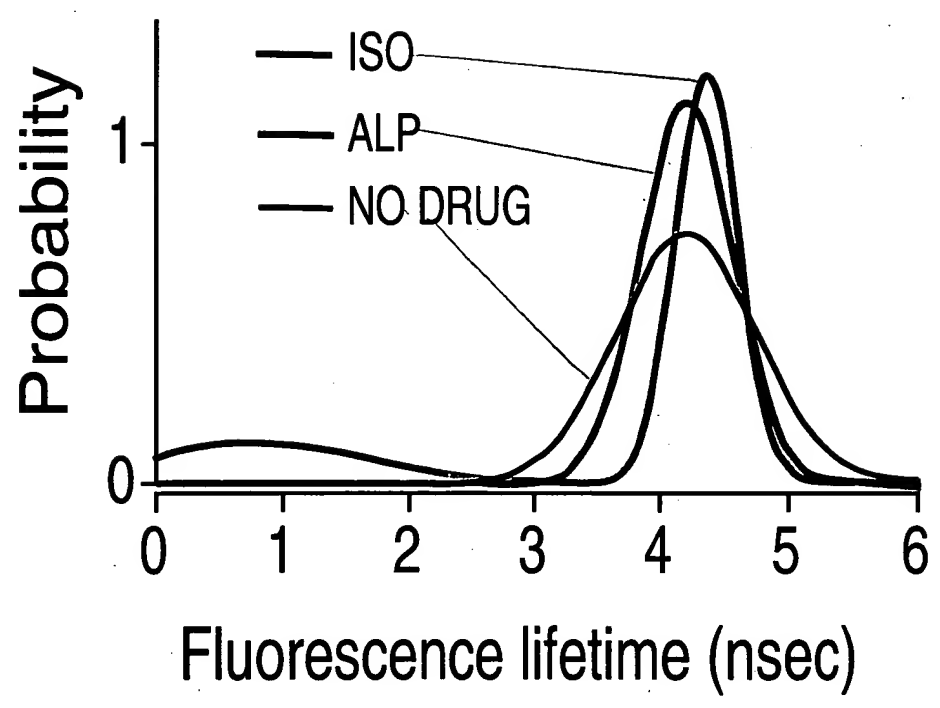


Fig. 6 B



101280" 1905660

Figure 7



09950506 08201  
T07230" T9052660

Figure 8A-B

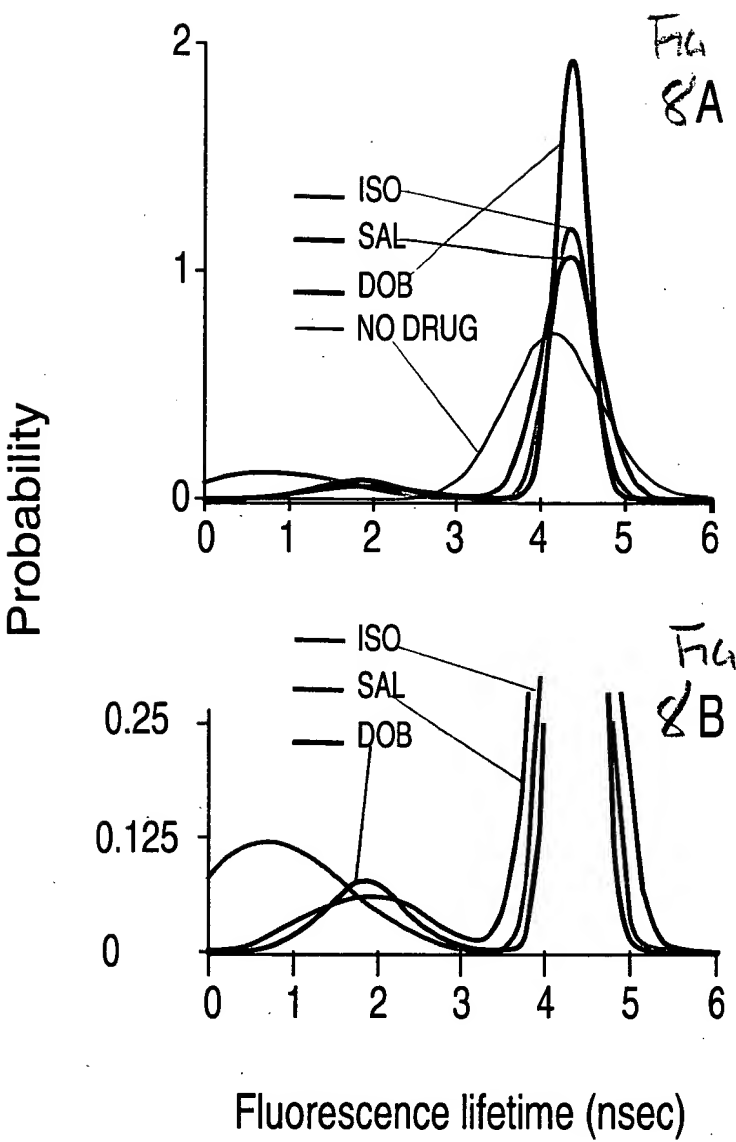




Fig. 9A

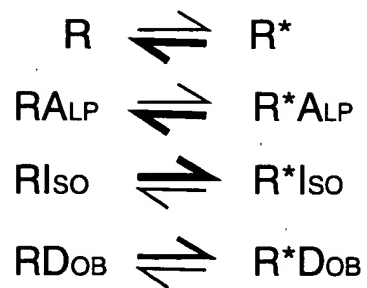


Fig. 9B

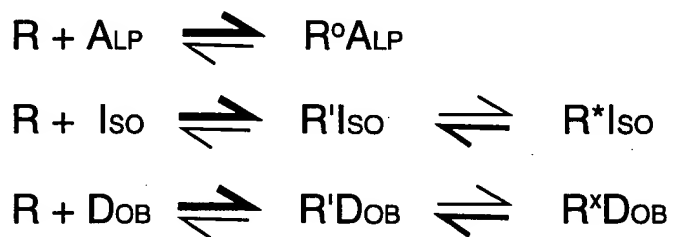


Fig. 10A

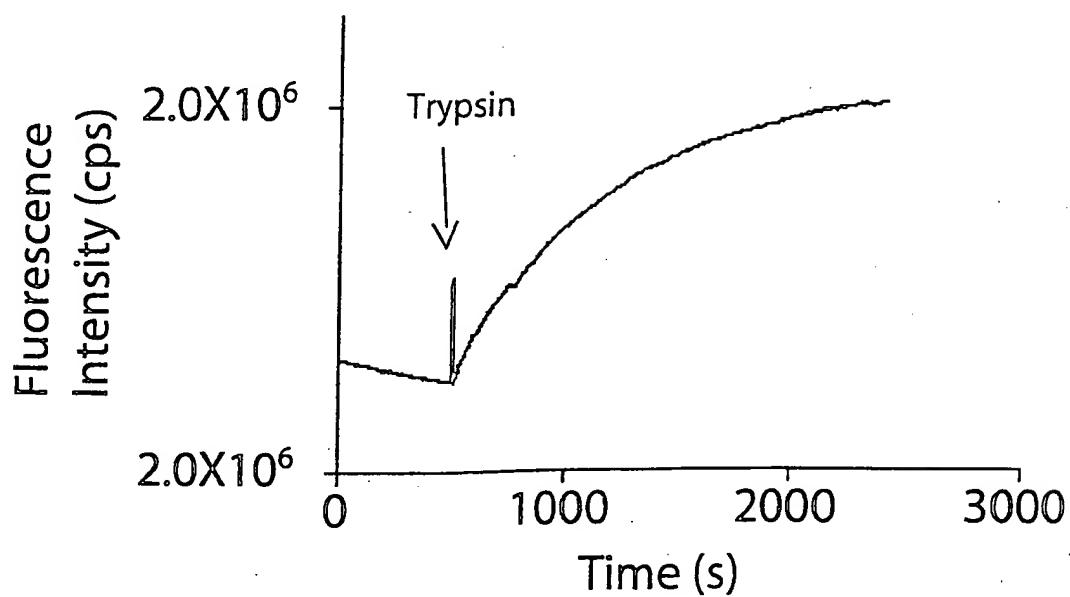
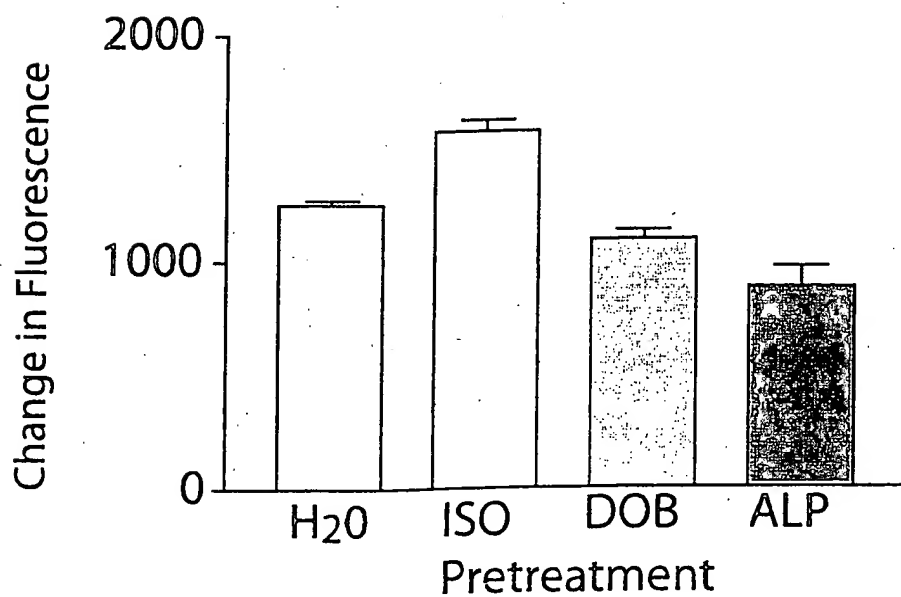


Fig. 10B



00000001-092101  
FOI280-1905660

Fig. 11

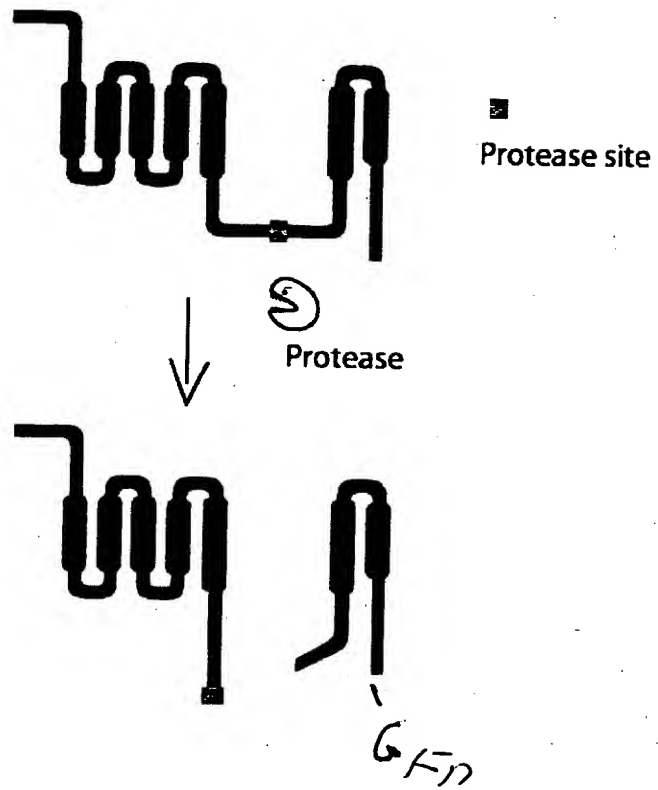


Fig. 12

# Modifications to the $\beta_2$ adrenergic receptor to add TEV protease sites

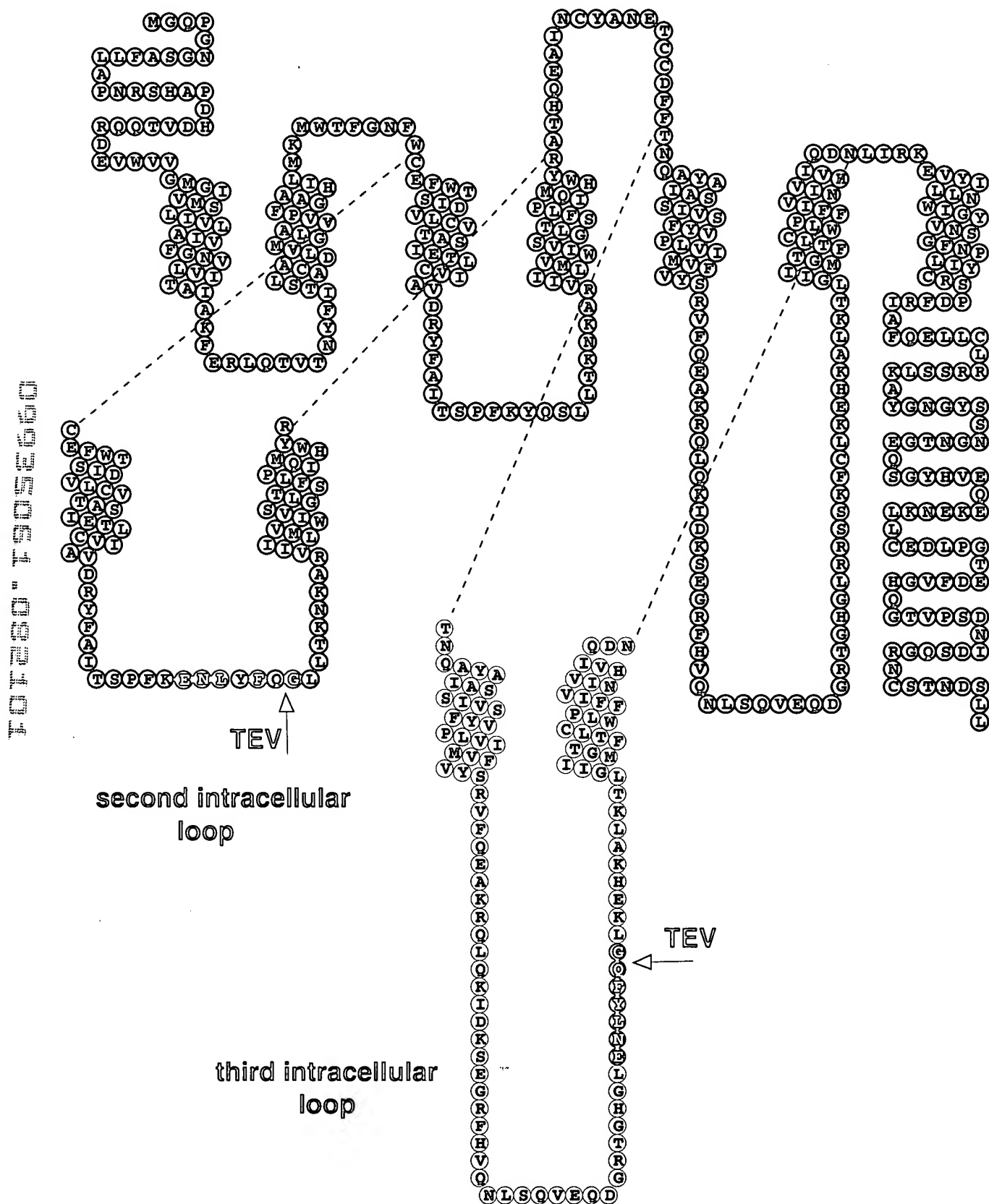


FIG. 13

# $\beta_2$ Adrenergic Receptor DNA and Protein sequence

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M G Q P G N G S A F L L A P N R S H A P D  
CAC GAC GTC ACG CAG CAA AGG GAC GAG GTG TGG GTG GTG GGC ATG GGC ATC GTC ATG TCT CTC  
H D V T Q Q R D E V W V V G M G I V M S L  
ATC GTC CTG GCC ATC GTG TTT GGC AAT GTG CTG GTC ATC ACA GCC ATT GCC AAG TTC GAG CGT  
I V L A I V F G N V L V I T A I A K F E R  
CTG CAG ACG GTC ACC AAC TAC TTC ATC ACT TCA CTG GCC TGT GCT GAT CTG GTC ATG GGC CTG  
L Q T V T N Y F I T S L A C A D L V M G L  
GCA GTG GTG CCC TTT GGG GCC GCC CAT ATT CTT ATG AAA ATG TGG ACT TTT GGC AAC TCT TGG  
A V V P F G A A H I L M K M W T F G N F W  
TGC GAG TTT TGG ACT TCC ATT GAT GTG CTG TGC GTC ACG GCT AGC ATT GAG ACC CTG TGC GTG  
C E F W T S I D V L C V T A S I E T L C V  
ATC GCA GTG GAT CGC TAC TTT GCC ATT ACT TCA CCT TTC AAG TAC CAG AGC CTG CTG ACC AAG  
I A V D R Y F A I T S P F K Y Q S L L T K  
AAT AAG GCC CGG GTG ATC ATT CTG ATG GTG TGG ATT GTG TCA GGC CTT ACC TCC TTC TTG CCC  
N K A R V I I L M V W I V S G L T S F L P  
ATT CAG ATG CAC TGG TAC CGG GCC ACC CAC CAG GAA GCC ATC AAC TGC TAT GCC AAT GAG ACC  
I Q M H W Y R A T H Q E A I N C Y A N E T  
TGC TGT GAC TTC TTC ACG AAC CAA GCC TAT GCC ATT GCC TCT TCC ATC GTG TCC TTC TAC GTT  
C C D F F T N Q A Y A I A S S I V S F Y V  
CCC CTG GTG ATC ATG GTC TTC GTC TAC TCC AGG GTC TTT CAG GAG GCC AAA AGG CAG CTC CAG  
P L V I M V F V Y S R V F Q E A K R Q L Q  
AAG ATT GAC AAA TCT GAG GGC CGC TTC CAT GTC CAG AAC CTT AGC CAG GTG GAG CAG GAT GGG  
K I D K S E G R F H V Q N L S Q V E Q D G  
CGG ACG GGG CAT GGA CTC CGC AGA TCT TCC AAG TTC TGC TTG AAG GAG CAC AAA GCC CTC AAG  
R T G H G L R R S S K F C L K E H K A L K  
ACG TTA GGC ATC ATC ATG GGC ACT TTC ACC CTC TGC TGG CTG CCC TTC TTC ATC GTT AAC ATT  
T L G I I M G T F T L C W L P F F I V N I  
GTG CAT GTG ATC CAG GAT AAC CTC ATC CGT AAG GAA GTT TAC ATC CTC CTA AAT TGG ATA GGC  
V H V I Q D N L I R K E V Y I L L N W I G  
TAT GTC AAT TCT GGT TTC AAT CCC CTT ATC TAC TGC CGG AGC CCA GAT TTC AGG ATT GCC TTC  
Y V N S G F N P L I Y C R S P D F R I A F  
CAG GAG CTC CTG TGC CTG CGC AGG TCT TCT TTG AAG GCC TAT GGG AAT GGC TAC TCC AGC AAC  
Q E L L C L R R S S L K A Y G N G Y S S N  
GGC AAC ACA GGG GAG CAG AGT GGA TAT CAC GTG GAA CAG GAG AAA GAA AAT AAA CTG CTG TGT  
G N T G E Q S G Y H V E Q E K E N K L L C  
GAA GAC CTC CCA GGC ACG GAA GAC TTT GTG GGC CAT CAA GGT ACT GTG CCT AGC GAT AAC ATT  
E D L P G T E D F V G H Q G T V P S D N I  
GAT TCA CAA GGG AGG AAT TGT AGT ACA AAT GAC TCA CTG CTG  
D S Q G R N C S T N D S L L

09935061.082404

Fig. 14

 **$\beta_2$  Adrenergic Receptor with TEV site in 2<sup>nd</sup> intracellular loop**

ATG GGG CAA CCC GGG AAC GGC AGC GCC TTC TTG CTG GCA CCC AAT AGA AGC CAT GCG CCG GAC  
M G Q P G N G S A F L L A P N R S H A P D  
CAC GAC GTC ACG CAG CAA AGG GAC GAG GTG TGG GTG GTG GGC ATG GGC ATC GTC ATG TCT CTC  
H D V T Q Q R D E V W V V G M G I V M S L  
ATC GTC CTG GCC ATC GTG TTT GGC AAT GTG CTG ATC ACA GCC ATT GCC AAG TTC GAG CGT  
I V L A I V F G N V L V I T A I A K F E R  
CTG CAG ACG GTC ACC AAC TAC TTC ATC ACT TCA CTG GCC TGT GCT GAT CTG GTC ATG GGC CTG  
L Q T V T N Y F I T S L A C A D L V M G L  
GCA GTG GTG CCC TTT GGG GCC GCC CAT ATT CTT ATG AAA ATG TGG ACT TTT GGC AAC TTC TGG  
A V V P F G A A H I L M K M W T F G N F W  
TGC GAG TTT TGG ACT TCC ATT GAT GTG CTG TGC GTC ACG GCT AGC ATT GAG ACC CTG TGC GTG  
C E F W T S I D V L C V T A S I E T L C V  
ATC GCA GTG GAT CGC TAC TTT GCC ATT ACT TCA CCT TTC AAG TAC CAG AGC CTG CTG ACC AAG  
I A V D R Y F A I T S P F K Y Q S L L T K  
AAT AAG GCC CGG GTG ATC ATT CTG ATG GTG TGG ATT GTG TCA GGC CTT ACC TCC TTC TGC CCC  
N K A R V I I L M V W I V S G L T S F L P  
ATT CAG ATG CAC TGG TAC CGG GCC ACC CAC CAG GAA GCC ATC AAC TGC TAT GCC AAT GAG ACC  
I Q M H W Y R A T H Q E A I N C Y A N E T  
TGC TGT GAC TTC TTC ACG AAC CAA GCC TAT GCC ATT GCC TCT TCC ATC GTG TCC TTC TAC GTT  
C C D F F T N Q A Y A I A S S I V S F Y V  
CCC CTG GTG ATC ATG GTC TTC GTC TAC TCC AGG GTC TTT CAG GAG GCC AAA AGG CAG CTC CAG  
P L V I M V F V Y S R V F Q E A K R Q L Q  
AAG ATT GAC AAA TCT GAG GGC CGC TTC CAT GTC CAG AAC CTT AGC CAG GTG GAG CAG GAT GGG  
K I D K S E G R F H V Q N L S Q V E Q D G  
CGG ACG GGG CAT GGA CTC GAA AAC CTC TAC TTC CAG GGG TTG AAG GAG CAC AAA GCC CTC AAG  
R T G H G L E N L Y F Q G L K E H K A L K  
ACG TTA GGC ATC ATC ATG GGC ACT TTC ACC CTC TGC TGG CTG CCC TTC TTC ATC GTT AAC ATT  
T L G I I M G T F T L C W L P F F I V N I  
GTG CAT GTG ATC CAG GAT AAC CTC ATC CGT AAG GAA GTT TAC ATC CTC CTA AAT TGG ATA GGC  
V H V I Q D N L I R K E V Y I L L N W I G  
TAT GTC AAT TCT GGT TTC AAT CCC CTT ATC TAC TGC CGG AGC CCA GAT TTC AGG ATT GCC TTC  
Y V N S G F N P L I Y C R S P D F R I A F  
CAG GAG CTC CTG TGC CTG CGC AGG TCT TCT TTG AAG GCC TAT GGG AAT GGC TAC TCC AGC AAC  
Q E L L C L R R S S L K A Y G N G Y S S N  
GGC AAC ACA GGG GAG CAG AGT GGA TAT CAC GTG GAA CAG GAG AAA GAA AAT AAA CTG CTG TGT  
G N T G E Q S G Y H V E Q E K E N K L L C  
GAA GAC CTC CCA GGC ACG GAA GAC TTT GTG GGC CAT CAA GGT ACT GTG CCT AGC GAT AAC ATT  
E D L P G T E D F V G H Q G T V P S D N I  
GAT TCA CAA GGG AGG AAT TGT AGT ACA AAT GAC TCA CTG CTG  
D S Q G R N C S T N D S L L

T01250.T505250

$\beta_2$  Adrenergic Receptor with TEV site in 3<sup>rd</sup> intracellular loop

ATG GGG CAA CCC GGG AAC GGC AGC GCC TTC TTG CTG GCA CCC AAT AGA AGC CAT GCG CCG GAC  
M G Q P G N G S A F L L A P N R S H A P D  
CAC GAC GTC ACG CAG CAA AGG GAC GAG GTG TGG GTG GGC ATG GGC ATC GTC ATG TCT CTC  
H D V T Q Q R D E V W V V G M G I V M S L  
ATC GTC CTG GCC ATC GTG TTT GGC AAT GTG CTG GTC ATC ACA GCC ATT GCC AAG TTC GAG CGT  
I V L A I V F G N V L V I T A I A K F E R  
CTG CAG ACG GTC ACC AAC TAC TTC ATC ACT TCA CTG GCC TGT GCT GAT CTG GTC ATG GGC CTG  
L Q T V T N Y F I T S L A C A D L V M G L  
GCA GTG GTG CCC TTT GGG GCC GCC CAT ATT CTT ATG AAA ATG TGG ACT TTT GGC AAC TTC TGG  
A V V P P F G A A H I L M K M W T F G N F W  
TGC GAG TTT TGG ACT TCC ATT GAT GTG CTG TGC GTC ACG GCT AGC ATT GAG ACC CTG TGC GTG  
C E F W T S I D V L C V T A S I E T L C V  
ATC GCA GTG GAT CGC TAC TTT GCC ATT ACT TCA CCT TTC AAG GAG AAT CTC TAC TTC CAG GGC  
I A V D R Y F A I T S P F K E N L Y F Q G  
CTG CTG ACC AAG AAT AAG GCC CGG GTG ATC ATT CTG ATG GTG TGG ATT GTG TCA GGC CTT ACC  
L L T K N K A R V I I L M V W I V S G L T  
TCC TTC TTG CCG ATT CAG ATG CAG TGG TAC CGG ACC CAG CAG GAA GCC ATC AAC TGC TAT  
S F L P I Q M H W Y R A T H Q E A I N C Y  
GCC AAT GAG ACC TGC TGT GAC TTC TTC ACG AAC CAA GCC TAT GCC ATT GCC TCT TCC ATC GTG  
A N E T C C D F T N Q A Y A I A S S I V  
TCC TTC TAC GTT CCC CTG GTG ATC ATG GTC TTC GTC TAC TCC AGG GTC TTT CAG GAG GCC AAA  
S F Y V P L V I M V F V Y S R V F Q E A K  
AGG CAG CTC CAG AAG ATT GAC AAA TCT GAG GGC CGC TTC CAT GTC CAG AAC CTT AGC CAG GTG  
R Q L Q K I D K S E G R F H V Q N L S Q V  
GAG CAG GAT GGG CGG ACG GGG CAT GGA CTC CGC AGA TCT TCC AAG TTC TGC TTG AAG GAG CAC  
E Q D G R T G H G L R R S S K F C L K E H  
AAA GCC CTC AAG ACG TTA GGC ATC ATC ATG GGC ACT TTC ACC CTC TGC TGG CTG CCC TTC TTC  
K A L K T L G I I M G T F T L C W L P F F  
ATC GTT AAC ATT GTG CAT GTG ATC CAG GAT AAC CTC ATC CGT AAG GAA GTT TAC ATC CTC CTA  
I V N I V H V I Q D N L I R K E V Y I L L  
AAT TGG ATA GGC TAT GTC AAT TCT GGT TTC AAT CCC CTT ATC TAC TGC CGG AGC CCA GAT TTC  
N W I G Y V N S G F N P L I Y C R S P D F  
AGG ATT GCC TTC CAG GAG CTC CTG TGC CTG CGC AGG TCT TCT TTG AAG GCC TAT GGG AAT GGC  
R I A F Q E L L C L R R S S L K A Y G N G  
TAC TCC AGC AAC GGC AAC ACA GGG GAG CAG AGT GGA TAT CAC GTG GAA CAG GAG AAA GAA AAT  
Y S S N G N T G E Q S G Y H V E Q E K E N  
AAA CTG CTG TGT GAA GAC CTC CCA GGC ACG GAA GAC TTT GTG GGC CAT CAA GGT ACT GTG CCT  
K L L C E D L P G T E D F V G H Q G T V P  
AGC GAT AAC ATT GAT TCA CAA GGG AGG AAT TGT AGT ACA AAT GAC TCA CTG CTG  
S D N I D S Q G R N C S T N D S L L

09935061.099101

[illegible]

MDSS  
NSANTPA  
TDALAYS  
PSPAPSC  
SWVNLSH  
PDSLNGD  
GPNRTDL  
PCLSDRG  
TGSPS





Fig. 17

# μ Opioid receptor DNA and Protein sequence

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ATG GAC AGC AGC GCT GCC CCC ACG AAC GCC AGC AAT TGC ACT GAT GCC TTG GCG TAC TCA AGT
M D S S A A P T N A S N C T D A L A Y S S
TGC TCC CCA GCA CCC AGC CCC GGT TCC TGG GTC AAC TTG TCC CAC TTA GAT GGC GAC CTG TCC
C S P A P S P G S W V N L S H L D G D L S
GAC CCA TGC GGT CCG AAC CGC ACC GAC CTG GGC GGG AGA GAC AGC CTG TGC CCT CCA ACC GGC
D P C G P N R T D L G G R D S L C P P T G
AGT CCC TCC ATG ATC ACG GCC ATC ACG ATC ATG GCC CTC TAC TCC ATC GTG TGC GTG GTG GGG
S P S M I T A I T I M A L Y S I V C V V G
CTC TTC GGA AAC TTC CTG GTC ATG TAT GTG ATT GTC AGA TAC ACC AAG ATG AAG ACT GCC ACC
L F G N F L V M Y V I V R Y T K M K T A T
AAC ATC TAC ATT TTC AAC CTT GCT CTG GCA GAT GCC TTA GCC ACC AGT ACC CTG CCC TTC CAG
N I Y I F N L A L A T S T L P F Q
AGT GTG AAT TAC CTA ATG GGA ACA TGG CCA TTT GGA ACC ATC CTT TGC AAG ATA GTG ATC TCC
S V N Y L M G T W P F G T I L C K I V I S
ATA GAT TAC TAT AAC ATG TTC AGC ATA TTC ACC CTC TGC ACC ATG AGT GTT GAT CGA TAC
I D Y Y N M F T S I F T L C T M S V D R Y
ATT GCA GTC TGC CAC CCT GTC AAG GCC TTA GAT TTC CGT ACT CCC CGA AAT GCC AAA ATT ATC
I A V C H P V K A L D F R T P R N A K I I
AAT GTC TGC AAC TGG ATC CTC TCT TCA GCC ATT GGT CTT CCT GTA ATG TTC ATA GCT ACA ACA
N V C N W I L S S A I G L P V M F I A T T
AAA TAC AGG CAA GGT TCC ATA GAT TGT ACA CTA ACA TTC TCT CAT CCA ACC TGG TAC TGG GAA
K Y R Q G S I D C T L T F S H P T W Y W E
AAC CTG CTG AAG ATC TGT GTT TTC ATC TTC GCC TTC ATT ATG CCA GTG CTC ATC ATT ACC GTG
N L L K I C V F I F A F I M P V L I I T V
TGC TAT GGA CTG ATG ATC TTG CGC CTC AAG AGT GTC CGC ATG CTC TCT GGC TCC AAA GAA AAG
C Y G L M I L R L K S V R M L S G S K E K
GAC AGG AAT CTT CGA AGG ATC ACC AGG ATG GTG CTG GTG GTG GCT GTG TTC ATC GTC TGC
D R N L R R I T R M V L V V V A V F I V C
TGG ACT CCC ATT CAC ATT TAC GTC ATC ATT AAA GCC TTG GTT ACA ATC CCA GAA ACT ACG TTC
W T P I H I Y V I I K A L V T I P E T T F
CAG ACT GTT TCT TGG CAC TTC TGC ATT GCT CTA GGT TAC ACA AAC AGC TGC CTC AAC CCA GTC
Q T V S W H F C I A L G Y T N S C L N P V
CTT TAT GCA TTT CTG GAT GAA AAC TTC AAA CGA TGC TTC AGA GAG TTC TGT ATC CCA ACC TCT
L Y A F L D E N F K R C F R E F C I P T S
TCC AAC ATT GAG CAA CAA AAC TCC ACT CGA ATT CGT CAG AAC ACT AGA GAC CAC CCC TCC ACG
S N I E Q Q N S T R I R Q N T R D H P S T
GCC AAT ACA GTG GAT AGA ACT AAT CAT CAG GTA CGC AGT CTC
A N T V D R T N H Q V R S L

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0033061.052101

F: G. 18

# μ Opioid receptor with TEV site in 2<sup>nd</sup> intracellular loop

ATG GAC AGC AGC GCT GCC CCC ACG AAC GCC AGC AAT TGC ACT GAT GCC TTG GCG TAC TCA AGT  
M D S S A A P T N A S N C T D A L A Y S S  
TGC TCC CCA GCA CCC AGC CCC GGT TCC TGG GTC AAC TTG TCC CAC TTA GAT GGC GAC CTG TCC  
C S P A P S P G S W V N L S H L D G D L S  
GAC CCA TGC GGT CCG AAC CGC ACC GAC CTG GGC GGG AGA GAC AGC CTG TGC CCT CCA ACC GGC  
D P C G P N R T D L G G R D S L C P P T G  
AGT ACC TCC ATG ATC ACG GCC ATC ACG ATC GGC CTC TAC TCC ATC GTG TGC GTG GTG GGG  
S P S M I T A I T I M A L Y S I V C V V G  
CTC TTC GGA AAC TTC CTG GTC ATG TAT GTG ATT GTC AGA TAC ACC AAG ATG AAG ACT GCC ACC  
L F G N F L V M Y V I V R Y T K M K T A T  
AAC ATC TAC ATT TTC AAC CTT GCT CTG GCA GAT GCC TTA GCC ACC AGT ACC CTG CCC TTC CAG  
N I Y I F N L A L A D A L A T S T L P F Q  
AGT GTG AAT TAC CTA ATG GGA ACA TGG CCA TTT GGA ACC ATC CTT TGC AAG ATA GTG ATC TCC  
S V N Y L M G T W P F G T I L C K I V I S  
ATA GAT TAC TAT AAC ATG TTC ACC AGC ATA TTC ACC CTC TGC ACC ATG AGT GTT GAT CGA TAC  
I D Y Y N M F T S I F T L C T M S V D R Y  
ATT GCA GTC TGC CAC CCT GTC AAG GAA AAC CTC TAC TTC CAG GGG CGA AAT GCC AAA ATT ATC  
I A V C H P V K E N L Y F Q G R N A K I I  
AAT GTC TGC AAC TGG ATC CTC TCT TCA GCC ATT GGT CTT CCT GTA ATG TTC ATA GCT ACA ACA  
N V C N W I L S S A I G L P V M F I A T T  
AAA TAC AGG CAA GGT TCC ATA GAT TGT ACA CTA ACA TTC TCT CAT CCA ACC TGG TAC TGG GAA  
K Y R Q G S I D C T L T F S H P T W Y W E  
AAC CTG CTG AAG ATC TGT GTT TTC ATC TTC GCC TTC ATT ATG CCA GTG CTC ATC ATT ACC GTG  
N L L K I C V F I F A F I M P V L I I T V  
TGC TAT GGA CTG ATG ATC TTG CGC CTC AAG AGT GTC CGC ATG CTC TCT GGC TCC AAA GAA AAG  
C Y G L M I L R L K S V R M L S G S K E K  
GAC AGG AAT CTT CGA AGG ATC ACC AGG ATG GTG CTG GTG GTG GTG GCT GTG TTC ATC GTC TGC  
D R N L R R I T R M V L V V V A V F I V C  
TGG ACT CCC ATT CAC ATT TAC GTC ATC ATT AAA GCC TTG GTT ACA ATC CCA GAA ACT ACG TTC  
W T P I H I Y V I I K A L V T I P E T T F  
CAG ACT GTT TCT TGG CAC TTC TGC ATT GCT CTA GGT TAC ACA AAC AGC TGC CTC AAC CCA GTC  
Q T V S W H F C I A L G Y T N S C L N P V  
CTT TAT GCA TTT CTG GAT GAA AAC TTC AAA CGA TGC TTC AGA GAG TTC TGT ATC CCA ACC TCT  
L Y A F L D E N F K R C F R E F C I P T S  
TCC AAC ATT GAG CAA CAA AAC TCC ACT CGA ATT CGT CAG AAC ACT AGA GAC CAC CCC TCC ACG  
S N I E Q Q N S T R I R Q N T R D H P S T  
GCC AAT ACA GTG GAT AGA ACT AAT CAT CAG GTA CGC AGT CTC  
A N T V D R T N H Q V R S L

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Fig. 19

# μ Opioid receptor with TEV site in 3<sup>rd</sup> intracellular loop

ATG GAC AGC AGC GCT GCC CCC ACG AAC GCC AGC AAT TGC ACT GAT GCC TTG GCG TAC TCA AGT  
M D S S A A P T N A S N C T D A L A Y S S  
TGC TCC CCA GCA CCC AGC CCC GGT TCC TGG GTC AAC TTG TCC CAC TTA GAT GGC GAC CTG TCC  
C S P A P S P G S W V N L S H L D G D L S  
GAC CCA TGC GGT CCG AAC CGC ACC GAC CTG GGC GGG AGA GAC AGC CTG TGC CCT CCA ACC GGC  
D P C G P N R T D L G G R D S L C P P T G  
AGT CCC TCC ATG ATC ACG GCC ATC ACG ATC ATG GCC CTC TAC TCC ATC GTG TGC GTG GTG GGG  
S P S M I T A I T I M A L Y S I V C V V G  
CTC TTC GGA AAC TTC CTG GTC ATG TAT GTG ATT GTC AGA TAC ACC AAG ATG AAG ACT GCC ACC  
L F G N F L V M Y V I V R Y T K M K T A T  
AAC ATC TAC ATT TTC AAC CTT GCT CTG GCA GAT GCC TTA GCC ACC AGT ACC CTG CCC TTC CAG  
N I Y I F N L A L A T S T L P F Q  
AGT GTG AAT TAC CTA ATG GGA ACA TGG CCA TTT GGA ACC ATC CTT TGC AAG ATA GTG ATC TCC  
S V N Y L M G T W P F G T I L C K I V I S  
ATA GAT TAC TAT AAC ATG TTC ACC AGC ATA TTC ACC CTC TGC ACC ATG AGT GTT GAT CGA TAC  
I D Y Y N M F T S I F T L C T M S V D R Y  
ATT GCA GTC TGC CAC CCT GTC AAG GCC TTA GAT TTC CGT ACT CCC CGA AAT GCC AAA ATT ATC  
I A V C H P V K A L D F R T P R N A K I I  
AAT GTC TGC AAC TGG ATC CTC TCT TCA GCC ATT GGT CTT CCT GTA ATG TTC ATA GCT ACA ACA  
N V C N W I L S S A I G L P V M F I A T T  
AAA TAC AGG CAA GGT TCC ATA GAT TGT ACA CTA ACA TTC TCT CAT CCA ACC TGG TAC TGG GAA  
K Y R Q G S I D C T L T F S H P T W Y W E  
AAC CTG CTG AAG ATC TGT GTT TTC ATC TTC GCC TTC ATT ATG CCA GTG CTC ATC ATT ACC GTG  
N L L K I C V F I F A F I M P V L I I T V  
TGC TAT GGA CTG ATG ATC TTG CGC CTC AAG AGT GTC CGC ATG CTC TCT GGC TCC AAA GAA AAG  
C Y G L M I L R L K S V R M L S G S K E K  
GAC GAA AAC CTC TAC TTC CAG GGG AGG AAT CTT CGA AGG ATC ACC AGG ATG GTG CTG GTG GTG  
D E N L Y F Q G R N L R R I T R M V L V V  
GTG GCT GTG TTC ATC GTC TGC TGG ACT CCC ATT CAC ATT TAC GTC ATC ATT AAA GCC TTG GTT  
V A V F I V C W T P I H I Y V I I K A L V  
ACA ATC CCA GAA ACT ACG TTC CAG ACT GTT TCT TGG CAC TTC TGC ATT GCT CTA GGT TAC ACA  
T I P E T T F Q T V S W H F C I A L G Y T  
AAC AGC TGC CTC AAC CCA GTC CTT TAT GCA TTT CTG GAT GAA AAC TTC AAA CGA TGC TTC AGA  
N S C L N P V L Y A F L D E N F K R C F R  
GAG TTC TGT ATC CCA ACC TCT TCC AAC ATT GAG CAA AAC TCC ACT CGA ATT CGT CAG AAC  
E F C I P T S S N I E Q Q N S T R I R Q N  
ACT AGA GAC CAC CCC TCC ACG GCC AAT ACA GTG GAT AGA ACT AAT CAT CAG GTA CGC AGT CTC  
T R D H P S T A N T V D R T N H Q V R S L

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